

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 151672

Wednesday, October 05, 2016 3:09:16 PM

151672

Page 2

Item ID: 646.4002

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AS350 Wiper Deflector

Start Date: 10/19/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 10/26/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 646.4002 Location : FG102								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

DAS
28
9-89DAS
27
9-89

DEC 2 2 2016

DAS
21
9-89

DEC 2 3 2016

MF
16-12-22

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Wednesday, October 05, 2016 3:09:15 PM

151672

646 4002

Required Date: 10/26/2016

Required Qty: 1.00

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.3410		Manufactured	No				Each	24.0000		1	DAS 6 9-89	DEC 21 2016	DAS 27 9-89
646.3410									**				
LH Wiper Deflector													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck010				24					
					125083			13					
					<u>97822</u>			11					
646.3411		Manufactured	No				Each	22.0000		1	DAS 6 9-89	DEC 21 2016	DAS 27 9-89
646.3411									**				
RH Wiper Deflector													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck010				22					
					125083			10					
					<u>97823</u>			12					
NAS1149F0332P		Purchased	No				Each	1,400.000		16	DAS 6 9-89	DEC 21 2016	DAS 27 9-89
NAS1149F0332P									**				
Washer													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				282					
					m133709			282		135948			
				ST262				1118					
					m135544			1118					

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Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER :									

Picklist Print

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Page 2

Work Order ID: 151672

151672

Parent Item: 646.4002

646 4002

Parent Item Name: AS350 Wiper Deflector

Start Date: 10/19/2016

Required Date: 10/26/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

Each

1,747.000

6

MS21042L3

Nut

**

DAS
6
9-89

DEC 21 2016
DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

7

M130922

7

GA

245

m134360

112

m135135

133

OVER007

600

m135767

600

ST303

895

m135407

10

m135530

600

m135600

285

136044

MS27039-1-19

Purchased

No

Each

201.0000

2

MS27039-1-19

Screw

**

DAS
6
9-89

DEC 21 2016
DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

82

m134134

82

ST280

119

m135774

119

136182

DQA: _____ Date: _____



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Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Page 3

Work Order ID: 151672

151672

Parent Item: 646.4002

646 4002

Parent Item Name: AS350 Wiper Deflector

Start Date: 10/19/2016

Required Date: 10/26/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-18

Purchased

No

Each

1,743.000

2

MS27039-1-18

Screw

**

DAS
6
9-89

DAS
27
9-89

DEC 21 2016

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

245

123522

51

124326

194

over006

1171

124326

1171

ST280

327

124326

327

646.3814

Manufactured

No

Each

12.0000

2

646 3814

Wiper Bracket

**

DAS
6
9-89

DAS
27
9-89

DEC 21 2016

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK106

12

125083

12

600.1012

Purchased

No

Each

10.0000

1

600 1012

Sealant PR1425B2 (#654 sem)

**

DAS
6
9-89

DAS
27
9-89

DEC 21 2016

DAS
28
9-89

Location

Loc Qty

Loc Code

cck017

10

m135407

1

m135530

4

m135600

5

MS24694-S53

Purchased

No

Each

274.0000

2

MS24694-S53

SCREW

**

DAS
6
9-89

DAS
27
9-89

DEC 21 2016

DAS
28
9-89

Location

Loc Qty

Loc Code

ST284

274

113359

274

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Shop Packet Print

Page 3

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05304

SHEET 1 OF 1

DWG NO. 646.4000

REV: C

PREPARED
BY

J. BECKER

DATE: 02/04/16

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: AS350 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):

A-ADD
R-REVISE

C-CREATE
D-DELETE

REASON: REVISED F/N 12.

ECR:

N/A

ACTION ITEM:

1. N/A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 151672 MJS
1670-06

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:						CHANGE CATEGORY	DER REVIEW REQUIRED
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM						☐ MAJOR ☒ MINOR	☐ YES ☒ NO

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 7593A651.

4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N D21200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(S)

05304

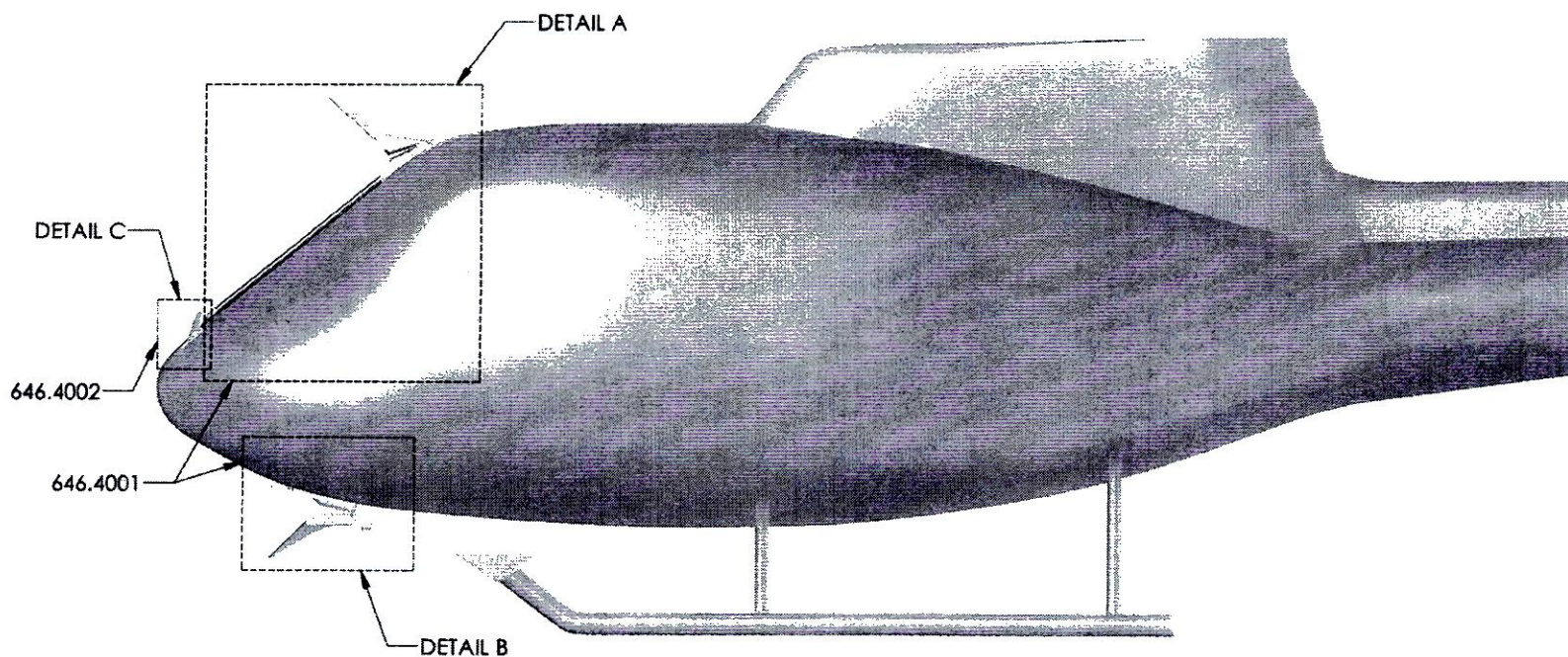
5	5	5	78	601.3875	SCREW	INSTRUMENT				
1	1	1	77	646.9410	SHIM					
	4	4	76	601.2764	WASHER	NAS1149H032P				
	2	2	75	601.2973	LOCKNUT	MS21042-08				
	2	2	74	601.2988	SCREW	MS27039-0813				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	AN316CAR				
	2	2	71	601.3209	LOCKNUT	MS21042-4				
	4	4	70	601.2638	WASHER	NAS1149H032P				
	2	2	69	601.2669	BOLT	ANMC7A				
	2	2	68	601.3119	CLEVIS	AN6A5 3AR				
	2	2	67	601.3121	EYE BOLT	AN6A-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT					
		2	64	601.3151	WASHER	NAS1149H032P				
		2	63	601.2911	SCREW	MS246P6533				
	24	24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	AN3-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PR-1425 CLASS II				
	1	1	53	600.0991	MAGHOBOND 6398 PART B					
	1	1	52	600.0990	MAGHOBOND 6398 PART A					
6	10	10	51	601.2826	BOLT	AN3-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-18				
	2	2	48	601.1365	SCREW	MS27039-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	22	44	601.1948	SCREW	MS27039-1-19				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
4006	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 0219H 0320, 0219 & 02145	02/06/2010	P. BRAVO
B	INCORPORATED ECN 0304A 0303P & 04731	11/04/2014	P. BRAVO
C	INCORPORATED ECN 0209B	09/04/2015	P. BRAVO

		2	2	41	601.2829	SCREW	MS246P4554			
		2	2	40	601.2831	RIVET	MS20426ADS-7			
		1	1	39	646.3716	GAUGE BRACKET				
		6	6	38	601.1953	SCREW	MS27039-1-12			
	2	2	2	37	646.3715	STRUT DOUBLER				
	2	2	2	36	601.2824	BOLT	AN3-5A			
12	36		36	35	601.2277	RIVET	GC92465-02			
6	18		18	34	600.0795	NUTPLATE	MS21047-5			
3	3		3	33	601.2565	RIVET	MS20470ADS-7			
1	1		1	32	646.3813	STRUT BRACKET				
4	4		4	31	601.2822	BOLT	AN3-3A			
2	2		2	30	646.3812	GUSSET BRACKET				
8	8		8	29	601.2544	RIVET	MS20470ADS-6			
1	1		1	28	646.3714	GUSSET				
	1	1	1	27	646.3610	FILLER				
	3	3	3	26	601.2830	SCREW	MS246P4555			
	2	2	2	25	601.2825	BOLT	AN3-6A			
	1	1	1	24	646.3811	RADIUS BLOCK				
	1	1	1	23	646.3712	CLIP				
	1	1	1	22	646.3711	CLIP				
8	8		8	21	601.2832	RIVET	MS20470ADS-5A			
14	14		14	20	601.2020	RIVET	CR3215-5-3			
4	6	4	6	10	601.2823	BOLT	AN3-4A			
	1	1	1	18	601.2827	BOLT	AN3-3A			
	5	5	5	17	601.2912	SCREW	MS246P4551			
1	1		1	16	646.3713	GUSSET				
1	1		1	15	646.3210	SUPPORT				
	1		1	14	646.3710	DOUBLER				
	1	1	1	13	646.3110	CHANNEL				
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042-3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149H032P	
				10	646.3410	LH WIPER DEFLECTOR				
				9	646.3411	RH WIPER DEFLECTOR				
		2	2	8	647.7703	STRUT ASSY				
		2	2	7	647.0112	STRUT BRACKET				
	1	1	1	6	646.3511	STRUT				
	1	1	1	5	646.3510	STRUT				
2	2		2	4	646.3810	BRACKET				
		1	1	3	646.2910	DEFLECTOR				
	1	1	1	2	646.3001	LOWER CUTTER ASSY				
		1	1	1	646.3301	UPPER CUTTER ASSY				
X					646.4006	LOWER CUTTER FIXED PROVISIONS				
	X				646.4005	LOWER CUTTER REMOVABLE PROVISIONS				
		X			646.4004	FIXED PROVISIONS KIT				
			X		646.4003	CABLE CUTTERS FOR WIPER DEFLECTOR PROVISIONS				
				X	646.4002	AS350 WIPER DEFLECTOR KIT				
				X	646.4001	AS350 CABLE CUTTERS KIT				
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY		NEXT ASSY (S)		ORIGINAL DATE 02/06/2010 DRAWN BY 14.001 CHECKED P. BRAVO DRAWING APPROVAL P. BRAVO DATE 02/06/2010		DART 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 2 PLACE DECIMALS 8/10 3 PLACE DECIMALS 1/100 4 PLACE DECIMALS 1/1000				SEE FIGURE CODE B 07M16 SCALE NONE		DOW. NO. 646.4000 SHEET 1 OF 5	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE 09-27-08		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY S. HART	CHECKED P. BRANG	DART AEROSPACE APICAL INDUSTRIES INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRANG 09-27-08			
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.005 ANGLES ±.5°		REV 8	QAGE CODE 07M26
SCALE NONE		DWG. NO. 646.4000	REV C
		SHEET 2 OF 5	

DETAIL D
TYPICAL GPS MOUNT KIT INSTALLATION

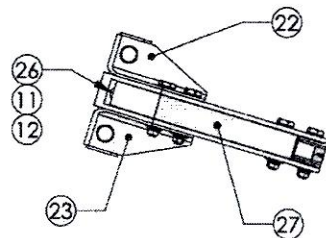
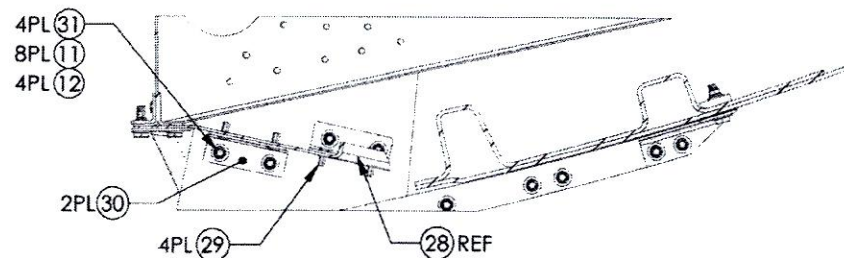
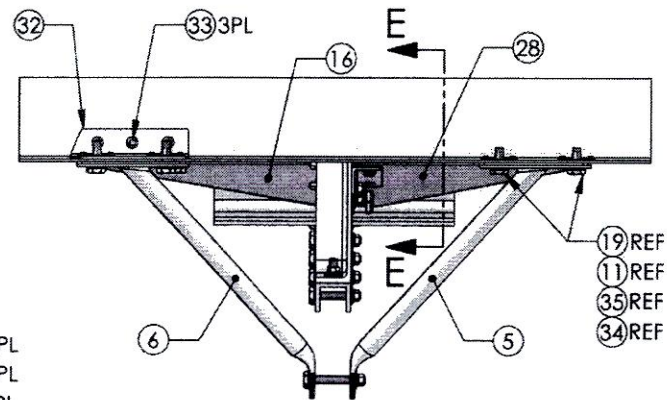
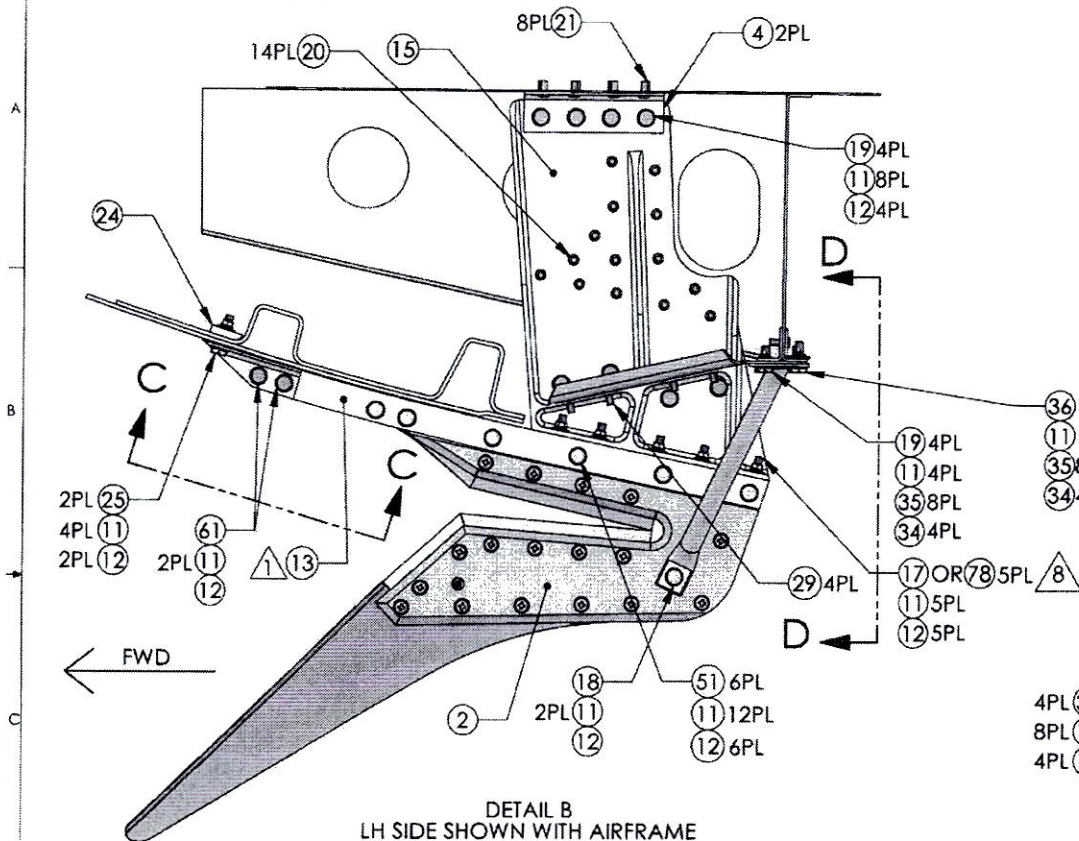


CPICAL DATE MAY 16 1993	05-27-93	 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5500
ISSUED BY J. BRAYO	CHECKED BY P. BRAYO	
UNWITING APPROVAL		
P. BRAYO	05-27-93	
CONTRACT NO.		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PRACTICE DECIMALS ±.010 2 PRACTICE DECIMALS ±.005 3 PRACTICE DECIMALS ±.001 ANGLES ± 1°			
---	--	--	--

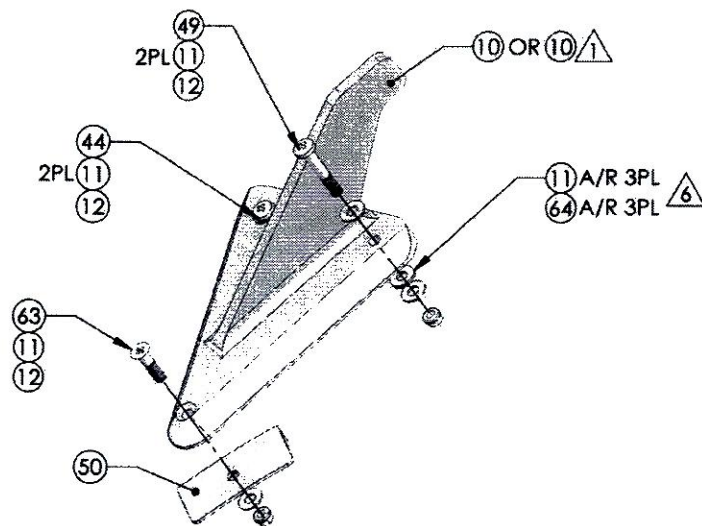
SUB	CAGE CODE	QWG. NO.	REV
D7A1E		646.4000	
CUTLINE NONE		SHEET 3 OF 5	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE REV 02/2011		DESIGNED BY S. HUFF		CHECKED BY P. BRAYVO	
DRAWN BY P. BRAYVO		 DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE		AS350 CABLE CUTTERS KIT	
DRAWINGS APPROVAL P. BRAYVO					
CONTRACT NO.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.1°					
SIZE	CAD CODE	QTY	NO.	REV	
B	07M76	646.4000		C	
SCALE NONE				SHEET 4 OF 5	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES
DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPRESS
WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE 08-27-08		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY S. HUNT	CHECKED BY P. BRAVO	DART AEROSPACE APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAVO 08-27-08			
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .0150 3 PLACE DECIMALS .005 ANGLES .5°		SET 8 CASH CASH 07M26 ENG. NO. 646,4000 REV. C	SCALE NONE SHEET 5 OF 5

REFERENCE ONLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APCAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPRESS WRITTEN PERMISSION OF APCAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M YHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 75935A651.

4 3M TAPE PRIMER 94. APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N D21200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(s)

05304

5	5	5	78	601.3875	SCREW					
1	1	1	77	646.9410	SHIM					
	4	4	76	601.2764	WASHER	NAS1149F0432P				
	2	2	75	601.2973	LOCKNUT	MS27042-08				
	2	2	74	601.2988	SCREW	MS27039-0813				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	AN3116C4R				
	2	2	71	601.3209	LOCKNUT	MS21042-4				
	4	4	70	601.2638	WASHER	NAS1149F0432P				
	2	2	69	601.2669	BOLT	ANAC7A				
	2	2	68	601.3119	CLEVIS	AN645-34R				
	2	2	67	601.3121	EYE BOLT	AN64A-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
REF	REF	REF	65	647.5701	GPS MOUNT KIT					
		2	64	601.3151	WASHER	NAS1149F0432P				
		2	63	601.2911	SCREW	MS2449MS53				
	24	24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	AN3-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PR-1425 CLASS B				
	1	1	53	600.0991	MAGNOBOND 6898 PART B					
	1	1	52	600.0990	MAGNOBOND 6898 PART A					
6	10	10	51	601.2826	BOLT	AN3-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-16				
	2	2	48	601.1365	SCREW	MS27039-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	2	44	601.1948	SCREW	MS27039-1-15				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
4006	4003	4004	4003	4002	3007	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 05304, 0379 & 02745	02/06/2010	P. BRAYO
B	INCORPORATED ECN 03004, 03079 & 04751	11/04/2014	P. BRAYO
C	INCORPORATED ECN 05076	09/02/2015	P. BRAYO

			2	2	41	601.2829	SCREW	MS24694554		
			2	2	40	601.2831	RIVET	MS20404ADS-7		
			1	1	39	646.3716	GAUGE BRACKET			
			6	6	38	601.1953	SCREW	MS27039-1-12		
		2		2	37	646.3715	STRUT DOUBLER			
	2		2	2	36	601.2824	BOLT	AN3-5A		
12	36			36	35	601.2277	RIVET	DCR24453-02		
6	18			18	34	600.0795	NUT/PLATE	MS21047-5		
3	3			3	33	601.2565	RIVET	MS20404ADS-7		
1	1			1	32	646.3813	STRUT BRACKET			
4	4			4	31	601.2822	BOLT	AN3-3A		
2	2			2	30	646.3812	GUSSET BRACKET			
8	8			8	29	601.2564	RIVET	MS20404ADS-6		
1	1			1	28	646.3714	GUSSET			
	1	1		1	27	646.3610	FILLER			
	3	3		3	26	601.2830	SCREW	MS24694555		
	2	2		2	25	601.2825	BOLT	AN3-6A		
	1	1		1	24	646.3811	RADIUS BLOCK			
		1	1	1	23	646.3712	CLIP			
	1		1	1	22	646.3711	CLIP			
8	8			8	21	601.2832	RIVET	MS20404ADS-5		
14	14			14	20	601.2020	RIVET	CR32155-3		
4	6	4	6	10	19	601.2823	BOLT	AN3-4A		
	1	1		1	18	601.2827	BOLT	AN3-13A		
	5	5		5	17	601.2912	SCREW	MS24694551		
1	1			1	16	646.3713	GUSSET			
1	1			1	15	646.3210	SUPPORT			
	1			1	14	646.3710	DOUBLER			
	1	1		1	13	646.3110	CHANNEL			
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042-3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149F0432P	
				1		10	646.3410	LN WIPER DEFLECTOR		
				1		9	646.3411	RN WIPER DEFLECTOR		
		2		2	8		647.7703	STRUT ASSY		
		2		2	7		647.0112	STRUT BRACKET		
	1	1		1	6		646.3511	STRUT		
	1	1		1	5		646.3510	STRUT		
2	2			2	4		646.3810	BRACKET		
				1	3		646.2910	DEFLECTOR		
	1	1		1	2		646.3001	LOWER CUTTER ASSY		
		1		1	1		646.3301	UPPER CUTTER ASSY		
X							646.4006	LOWER CUTTER FIXED PROVISIONS		
	X						646.4005	LOWER CUTTER REMOVABLE PROVISIONS		
		X					646.4004	FIXED PROVISIONS KIT		
			X				646.4003	CABLE CUTTERS KIT WITHOUT FIXED PROVISIONS		
				X			646.4002	AS350 WIPER DEFLECTOR KIT		
					X		646.4001	AS350 CABLE CUTTERS KIT		
4006	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY		PARTS LIST	
NEXT ASSY (S)		ORDER DATE: 08/22/08 ORDER BY: P. BRAYO DRAWING APPROVAL: P. BRAYO DATE: 08/22/08	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 3 PLACE DECIMALS ARE TO APPLY UNLESS NOTED 1/8" = 1"		DART AEROSPACE 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300 APCAL INDUSTRIES, INC. DBA DART AEROSPACE	
AS350 CABLE CUTTERS KIT B 07M26 646.4000 C SCALE NONE SHEET 1 OF 5			